Next Generation Logistics Transactions – Extensible Markup Language (XML) Kick-Off Meeting

DLSS/DLMS X12 & XML – Our Approach

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Defense Logistics Management Standards Office
http://www.dla.mil/j-6/dlmso/

MODELS
1984
FIPS 161.2
1996
XXXX
XXXX
DoDD
8190.1
2000
XML
2002
MILS
1960'S

Business Rules and Stand

Outline:

- Purpose/mission
- Key DoD oversight policy
- What we do
- Who we do it for
- How we do it
- Not easy stuff
- Current focus areas
  - Migrating DoD unique information standards to common commercial standards
  - Supporting modernization (ERPs)
  - Exploring new technology solutions
    - XML within the DLMS
- Summary

Business Rules and Stand

Purpose/Mission:

- **Facilitate enterprise integration and continuous process improvements to logistics management and operations by:**
  - **Developing business rules and implementation of DoD policy**
  - **Developing and managing the DoD logistics information exchange infrastructure**
  - **Publishing detailed procedures that identify who does what, when, and how along the D supply chain:**

Business Rules and Stand

Key DoD oversight policy:

- **DoDD 8190.1, DoD Logistics Use of EDI Standards:**
  - **DoD Executive Agent for logistics data interchange**
- **DoDD 4140.1 Materiel Management Policy**
  - **Authorizes publication of DoD business rules and standards**
- **DoD 4140.1-R Materiel Management Regulation**
  - **"Loaded" with policy, procedure, and guidance**
- **DoD 4000.25 series of Manuals covering both the DEMS and CLSS/MILS (8K pages)**
  - **Prescribes logistics management policy, responsibilities, procedures, rules, and**

siness rules and standards operational development an implementation is well grounded in DoD policy

Business Rules and Stand

What we do:

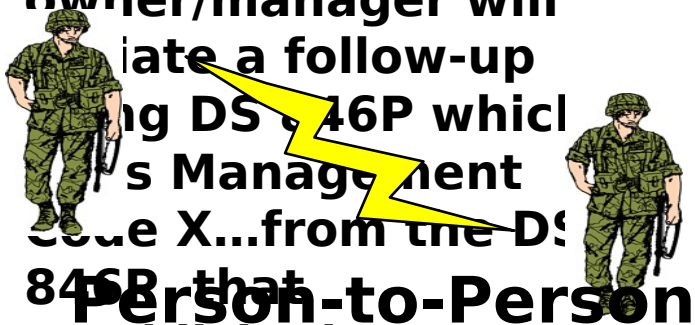
- **DLMSO administers DoD-wide:**
  - **Defense Logistics Standard Systems (DLSS)**
  - **Defense Logistics Management System (DLM**
  - **DoD Physical Inventory Control Program**
  - **DoD Logistics Functional Data Administration**
- **DLMSO chairs:**
  - **DLMS Process Review Committees (PRCs)**
  - **Unique Item Tracking Committee**
  - **Customer Wait Time / Logistics Response Tim**
  - **DoD Supply Discrepancy Reporting Sub-Comm**
  - **Joint Physical Inventory Working Group**
  - **Joint Small Arms Coordinating Group**
  - **DoDAAD/MAPAD Committees**

Business Rules and Sta

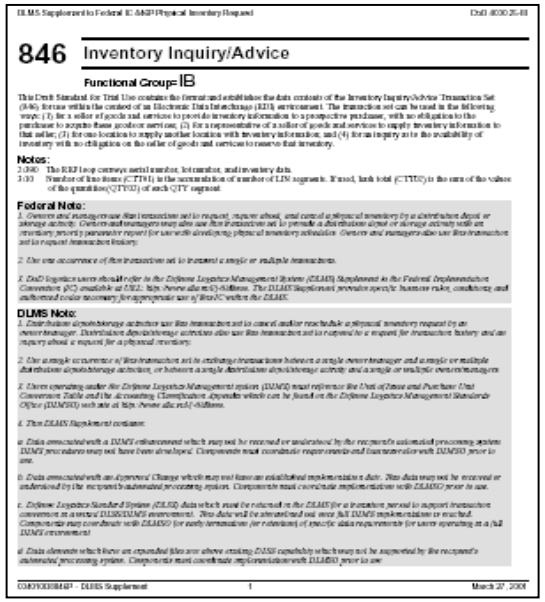
DoD Policy → Business Rules → Standards

DoD 4140.1-R… Ensure accurate property…records for the physical inventory are maintained in support of customers requirements and ...diness by ...rm... physical inv... ...nd locat... ...ys... ...conduc... ...ns.

DoD 4000.25-M, Vol 2 (28 pages of detailed business rules that support DoD policy)… C6.3.8.1.1 Requested Inventory. When the owner/manager has requested an unscheduled inventory…the owner/manager will ...iate a follow-up ...g DS ...46P which ...s Manage...ent ...ode X…from the DS... 846P that ... established…



Person-to-Person



846 Inventory Inquiry/Advice

Functional Group=IB

This Draft Standard for Trial Use contains the formats and establishes the data contents of the Inventory Inquiry/Advice Transaction Set (846) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used in the following ways: (1) for a seller of goods and services to post its inventory information to a prospective purchaser, with no obligation to the purchaser to acquire these goods or services; (2) for a representative of a seller of goods and services to supply inventory information to that seller; (3) for one location to supply another location with inventory information; and (4) for an inquiry as to the availability of inventory with no obligation on the seller of goods and services to reserve that inventory.

Notes:
2/010 The REF loop conveys serial number, lot number, and inventory data.
3/10 Number of line items (CTT01) is the accumulation of number of LIN segments. If used, hash total (CTT02) is the sum of the values of the quantities (QTY02) of each QTY segment.

Federal Note:
1. Owners and managers use this transaction set to request, inquire ahead, and cancel a physical inventory by a distribution depot or storage activity. Owners and managers may also use this transaction set to persuade a distribution depot or storage activity with an inventory to carry a particular request for use with developing physical inventory schedules. Owners and managers also use this transaction set to request transaction history.
2. Use one occurrence of this transaction set to transmit a single or multiple transactions.
3. DoD logistics users should refer to the Defense Logistics Management System (DLMS) Supplement to the Federal Implementation Convention (IC) available at URL: http://www.dla.mil/j-6/dlmso. The DLMS Supplement provides specific business rules, conditions, and authorized codes necessary for appropriate use of this IC within the DLMS.

DLMS Note:
1. Distribution depot/storage activities use this transaction set to cancel and/or reschedule a physical inventory request by an owner/manager. Distribution depot/storage activities also use this transaction set to respond to a request for transaction history and an inquiry ahead, a request for a physical inventory.
2. Use a single occurrence of this transaction set to exchange transactions between a single owner/manager and a single or multiple distribution depot/storage activities, or between a single distribution depot/storage activity and a single or multiple owners/managers.
3. Users operating under the Defense Logistics Management system (DLMS) must reference the Unit of Issue and Purchase Unit Conversion Table and the Accounting Classification Appendix which can be found on the Defense Logistics Management Standards Office (DLMSO) web site at http://www.dla.mil/j-6/dlmso.
4. This DLMS Supplement contains:
a. Data unreconciled with a DLMS enhancement which may not be received or understood by the recipient's automated processing system. DLMS procedures may not have been developed. Components must coordinate requirements and implementation with DLMSO prior to use.
b. Data unreconciled with an Approved Change which may not have an established implementation date. This data may not be received or understood by the recipient's automated processing system. Components must coordinate implementation with DLMSO prior to use.
c. Defense Logistics Standard System (DLSS) data which must be retained in the DLMS for a transition period to support transaction conversion in a mixed DLSS/DLMS environment. This data will be streamlined out once full DLMS implementation is reached. Components may coordinate with DLMSO for early terminations (or retentions) of specific data requirements for users operating in a full DLMS environment.
d. Data elements which have an expanded files size above existing DLSS capability which may not be supported by the recipient's automated processing system. Components must coordinate implementation with DLMSO prior to use.

DSMO/DSSBMP - DLMS Supplement 1 March 27, 2000

Machine-to-Machine

integration glue…defines who does what, to whom, when, and

Business Rules and Sta

Business Rule Hierarchy

Governing Rules - Operating Rules - Automated R

Physical Inventory Control

Governing Rules

DoD Policy is contained in DoD 4140.1-R, paragraph C5.7.5.1.1
Physical inventory procedures are contained in DoD 4000.25-M, Vol 2, Chapter 6

Operating Rules

Example: Paragraph C6.2.6.1: Owners/managers and storage activities shall daily match all active record (stock number which had any transactions affecting record balances) on hand balances.

Automated Rules

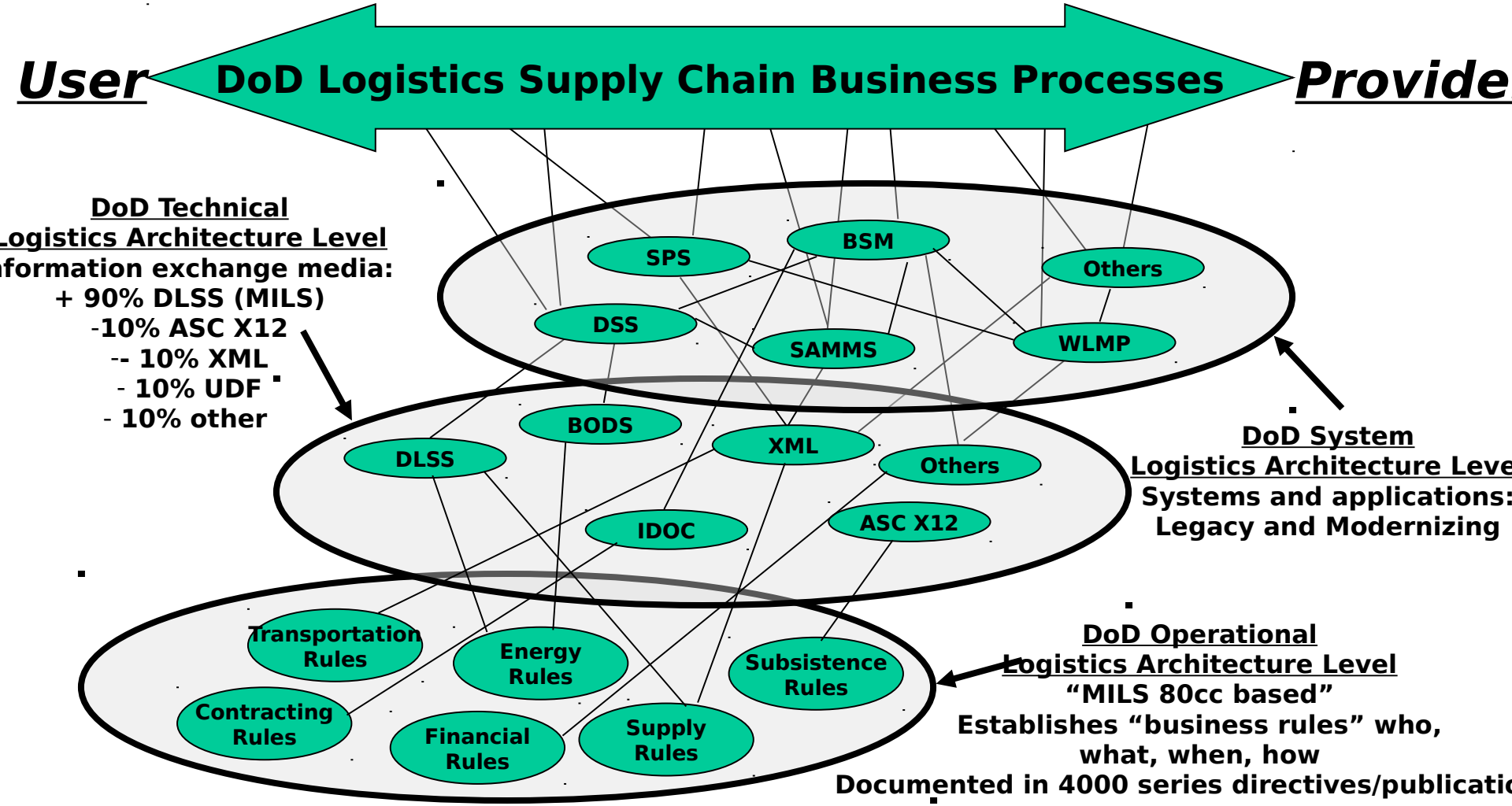
The storage activity shall submit the daily closing balance to each affected owner/manager using MS supplements to Federal IC 846R with Code List Qualifier Code FH citing code 1 (End of Day Processi

Computer Speak

**If DS846R LQ02 QTY02 Quantity.Qualifer.Code = SYSTEM.BALANCE
then Generate DS846R LQ01 Code. List. Qualifier.Code FH=1
(To show Balance is End of Day) and LQ02 QTY02 Code.List.Qualifier
Quantity(End of Day Balance)**

**If DS846R LQ02 QTY02 Quantity.Qualifier.Coder Not Equal SYSTEM.BALANCE
then Generate DS947I W1901 Quantity.or.Status.Adjustsment.Reason.Code=AB
and W1902 Credit.Debit.Quantity (End of Day Balance)**

Business Rules and Star



DoD dilemma: To maintain *backward compatibility* – Modernizing to Legacy:
driven business rules must be embedded/applied at the operational, technical, and system

Business Rules and

Transaction Construction Rules (Level 1):
"What's allowed and what's not" available codes for data elements, mandatory or optional – technical construction

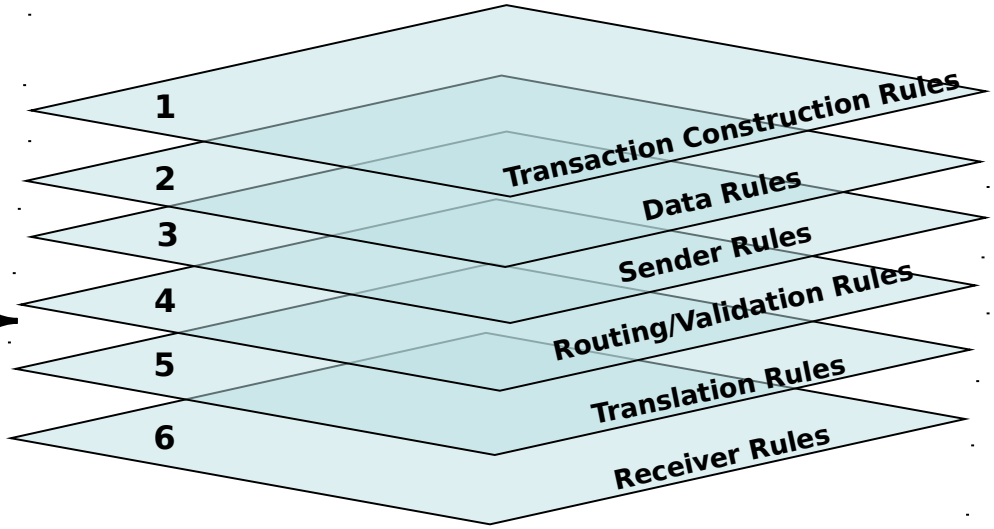
Data Rules (Level 2): **The rules about each data element: meaning, structure, valid values, etc.**

Sender Rules (Level 3): **Describes how to communicate senders business requirements**

Routing/Validation Rules (Level 4):
Describes how transactions are validated and where DAAS sends them

Translation Rules (Level 5):

Machine Readable Transac



Levels 2 through 6 are independent of the media of transport (level 1)
DLSS, DLMS, XML, IDOC, UDF, BODS, etc.

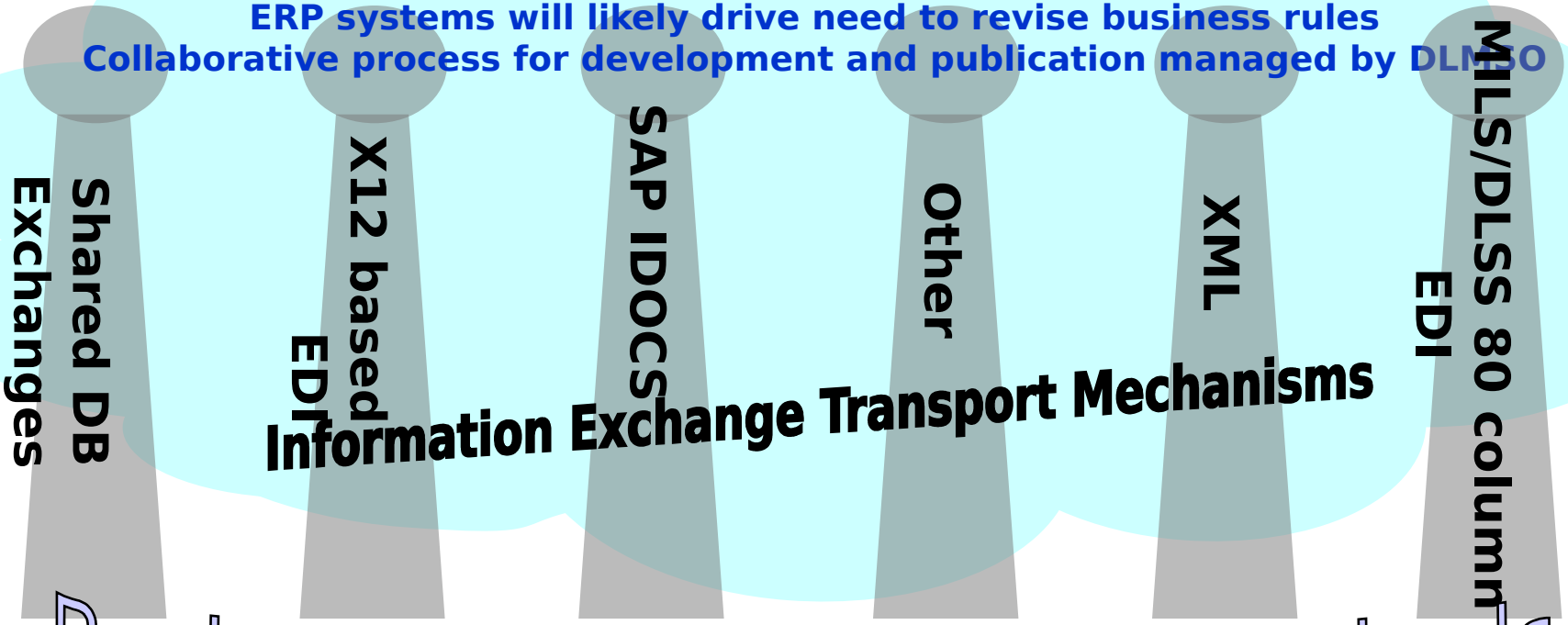
integration glue…defines who does what, to whom, when, and

Business Rules and Sta

I ormation Exchange Business Rules and Standa ds

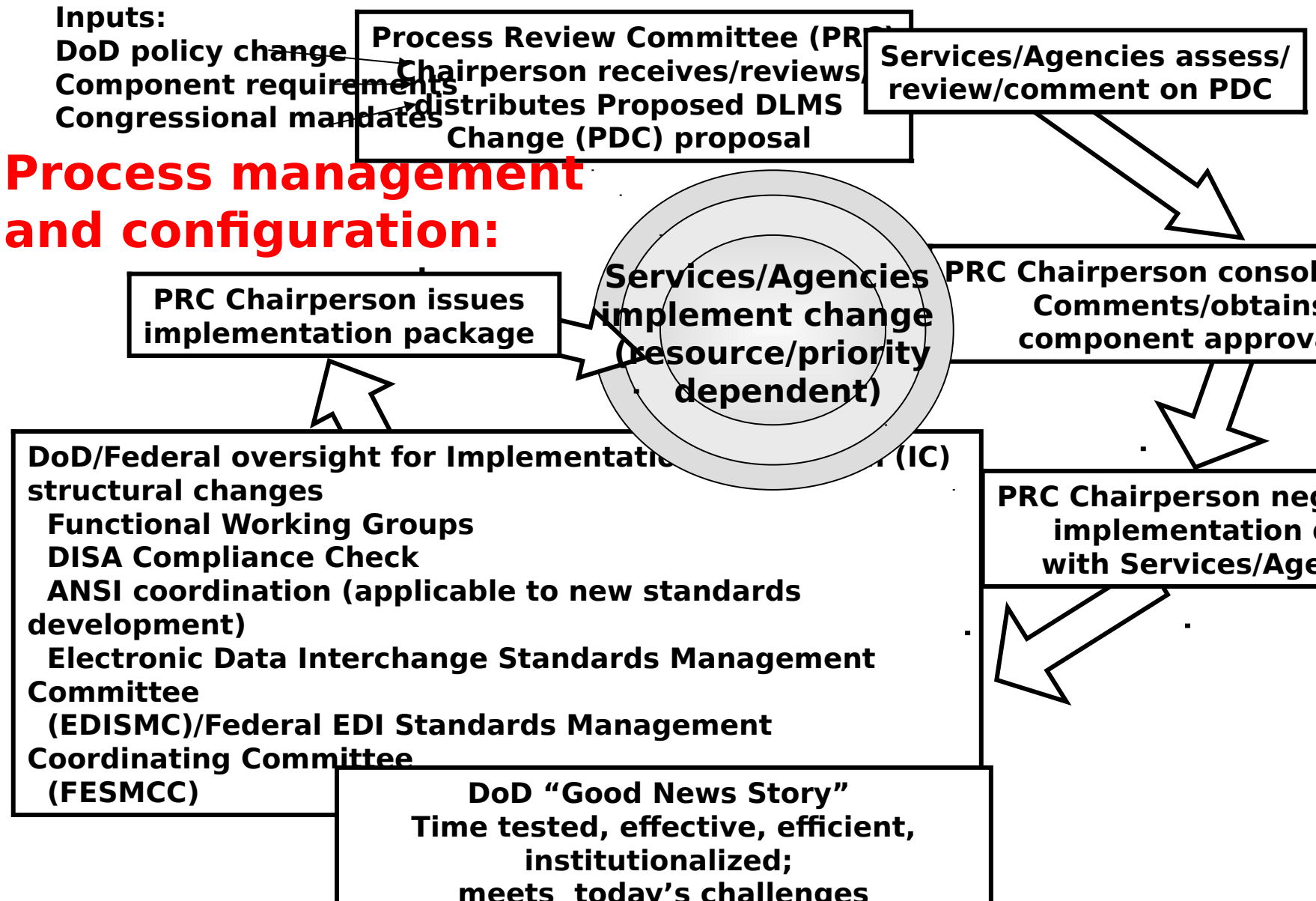
A Key to Interoperability

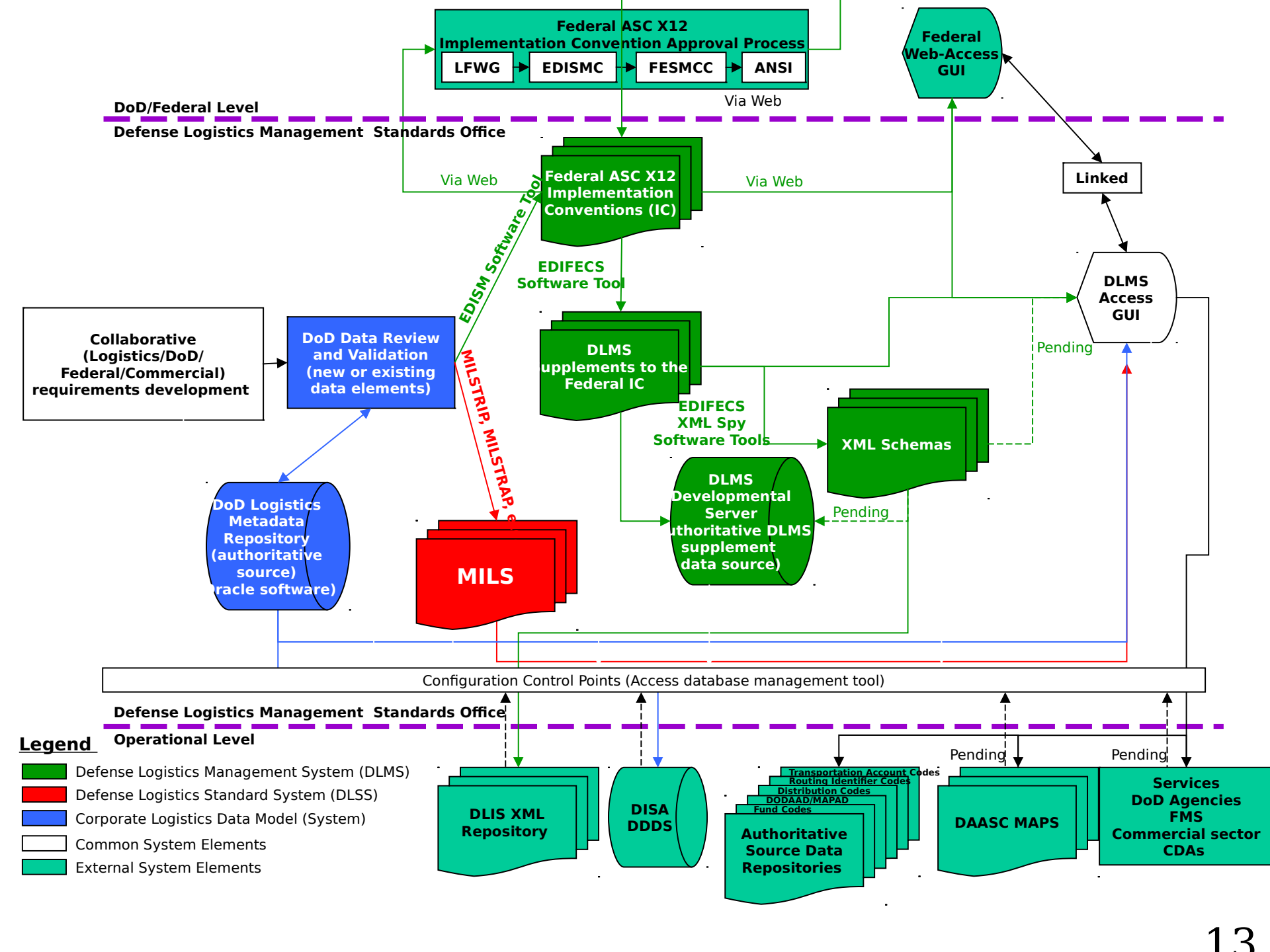
Process rules and standards documented in DoD 4000.25-M
ERP systems will likely drive need to revise business rules
Collaborative process for development and publication managed by DLMSO



Business Rules and Data Standards

Business Rules and Stand




Federal ASC X12
Implementation Convention Approval Process
LFWG
EDISMC
FESMCC
ANSI
Via Web
Federal
Web-Access
GUI
DoD/Federal Level
Defense Logistics Management Standards Office
Via Web
Federal ASC X12
Implementation
Conventions (IC)
Via Web
Linked
EDISM Software Tool
EDIFECS
Software Tool
DLMS
Access
GUI
Collaborative
(Logistics/DoD/
Federal/Commercial)
requirements development
DoD Data Review
and Validation
(new or existing
data elements)
DLMS
upplements to the
Federal IC
Pending
EDIFECS
XML Spy
Software Tools
XML Schemas
DLMS
Developmental
Server
uthoritative DLMS
supplement
data source)
Pending
DoD Logistics
Metadata
Repository
(authoritative
source)
racle software)
MILS
Configuration Control Points (Access database management tool)
Defense Logistics Management Standards Office
Operational Level
Pending
Pending
DLIS XML
Repository
DISA
DDDS
Transportation Account Codes
Routing Identifier Codes
Distribution Codes
DODAAD/MAPAD
Fund Codes
Authoritative
Source Data
Repositories
DAASC MAPS
Services
DoD Agencies
FMS
Commercial sector
CDAs
Legend
Defense Logistics Management System (DLMS)
Defense Logistics Standard System (DLSS)
Corporate Logistics Data Model (System)
Common System Elements
External System Elements

Business Rules and Stand

Who we do it for --- customers/users:

- **TOP LEVEL MANAGEMENT: OSD PSAs, Joint Chiefs of Staff (JCS), UCCs, Component Headquarters, Major Commands, Civil Agency Headquarters, etc.**

- **DoD & Non DoD OPERATIONAL TRADING PARTNERS: Cradle-to-grave process management activities, enterprise-wide service providers, private sector product & service providers, and civil agencies, and foreign governments.**

Business Rules and Stand

Not Easy Stuff:

- **How does a customer identify when he wants delivery?**
  - **Priority designator --- maybe unless there's an RDD**
  - **Required delivery date --- maybe unless RDD contains:**
    - **A special code or…**
    - **Transaction has special management indicator or…**
    - **There is pre-agreed to arrangement with supplier**

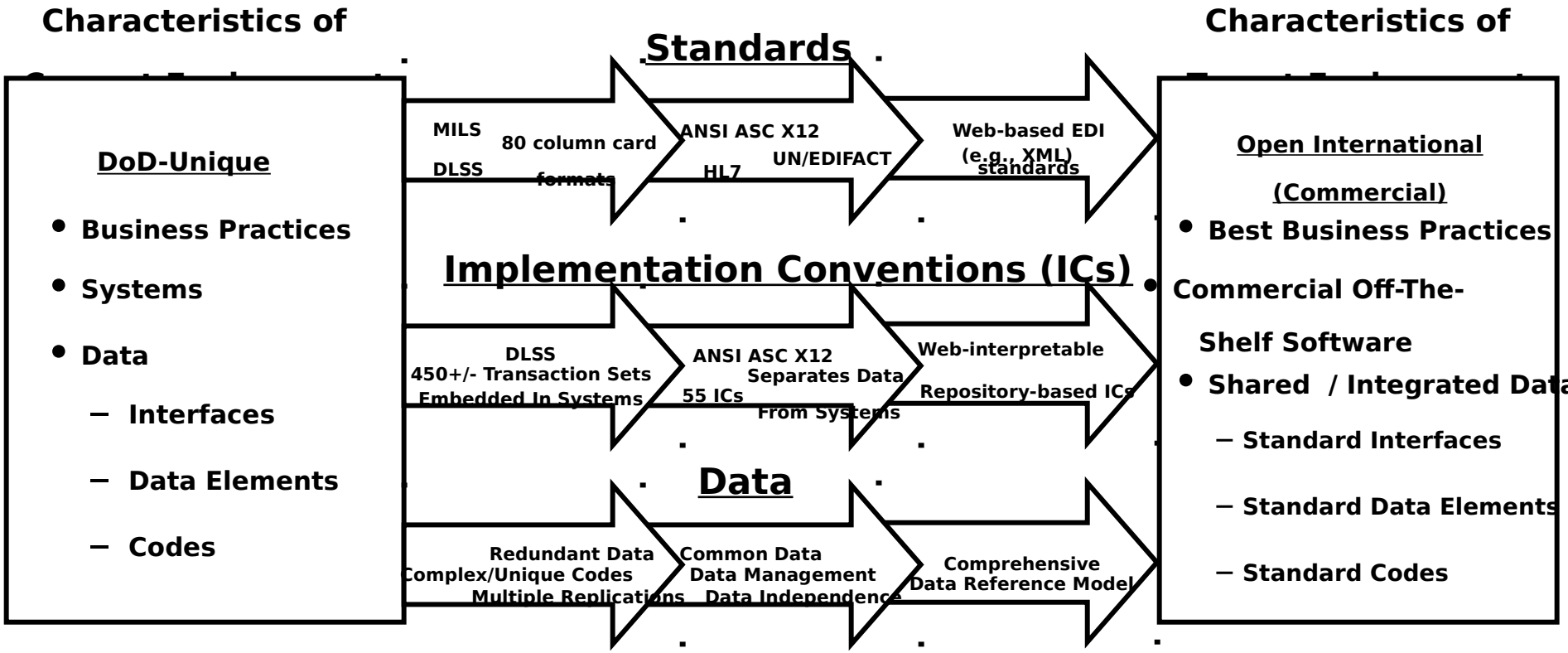
Business Rules and Stand

Current focus areas:

- Migrating DoD unique information standards to common commercial practices (Federally mandated standards)
- Supporting modernization (Enterprise Resource Planning (ERP))
- Exploring new technology solutions
- Process management and configuration

Business Rules and Stand

Migrating DoD unique information standards to common commercial standards:



Pace of standards, ICs, and data must

Business Rules and Stan

Supporting modernization (ERPs):

- **IAW DoD direction and in coordination with Components:**
  - **Identified common enterprise-wide requirements**
  - **Mapped requirements against current capabilities – revealed gaps**
  - **Identified policies/framework need**
  - **en nomic**
  - **tive implementation**
  - **ote plan of action with implementation**
  - **ston**

Army Log Mod

SAP

DON IT Umbrella Program

BSM business systems modernization a strategy for 21st century logistics

Navy ERP

Business Rules and Stand

DoDD 8190.1…

Exploring new technology solutions:

"A broad base of business rules to include uniform policies, procedures, time standards, transactions, and data management designed to meet DoD's requirements for total logistics support. The DLMS is founded upon the sound application of ANSI ASC X12 EDI and will be expanded to employ other emerging EB/EC technologies such as: data sharing, automated identification technology, object-oriented user interfaces, electronic malls, web-based technology, and electronic funds tra…

Opens the door to new and emerging technologies

(XML)?

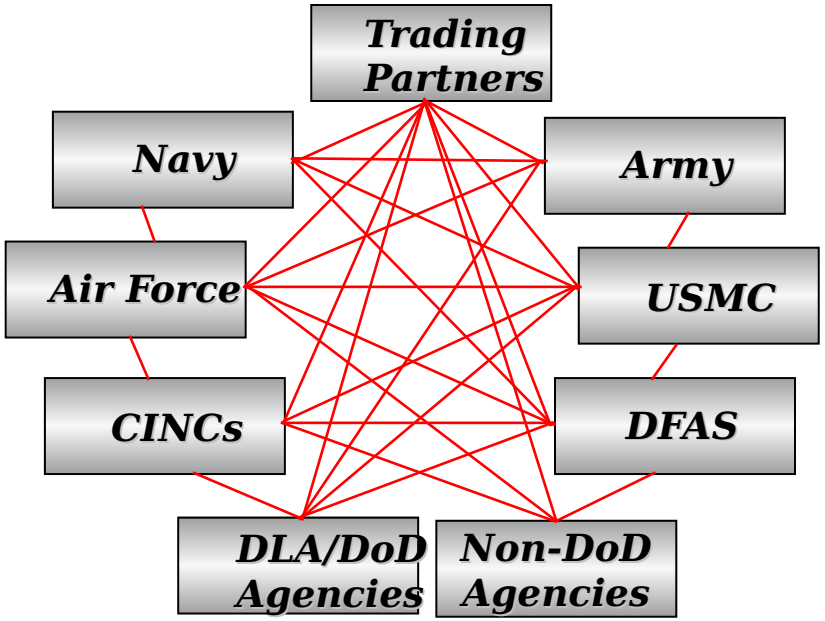
Business Rules and

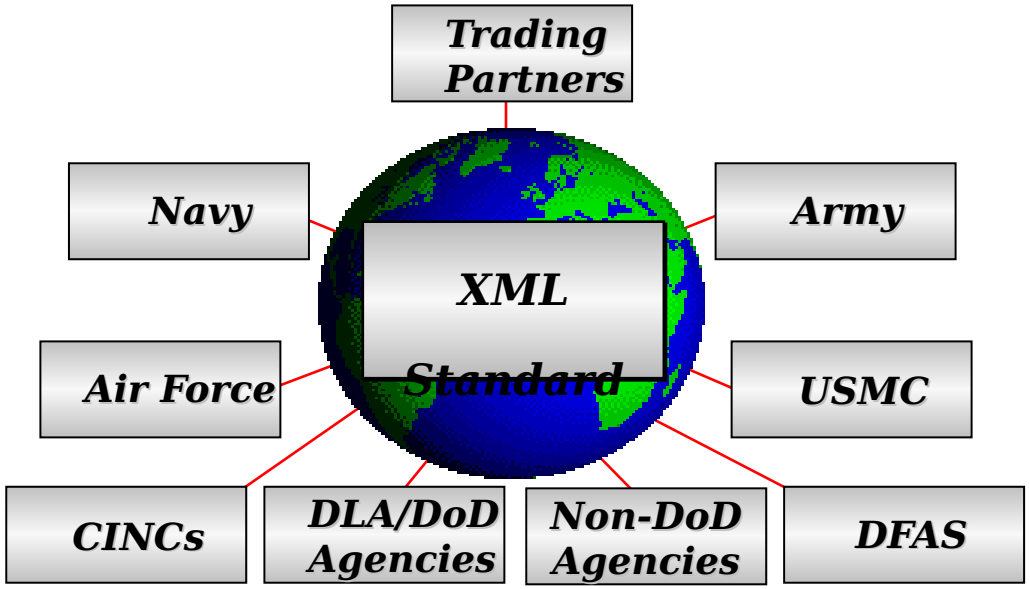
- XML - subset of SGML (Standardized General Markup Language) and HTML

- Provides more flexible EDI form designed to support WEB based applications
- DLA/DLMSO strongly supporting development of XML schemas and implementation of XML standard for DoD
- DLMSO has developed W3C compliant XML schemas, using EDIFECS SpecBuilder tool. The XML schemas equate to the DLMS ANSI ASC X12 ICs/supplements.
- DLMSO participating/supporting various industry groups (ASC X12 XML Workgroup, Federal CIO XML Workgroup, and DISA Namespace Manager & Repositories)
- DAASC has capability to translate - MILS/DLSS><DLMS X12><DLMS XML

Business Rules and

Why a “standard” approach?

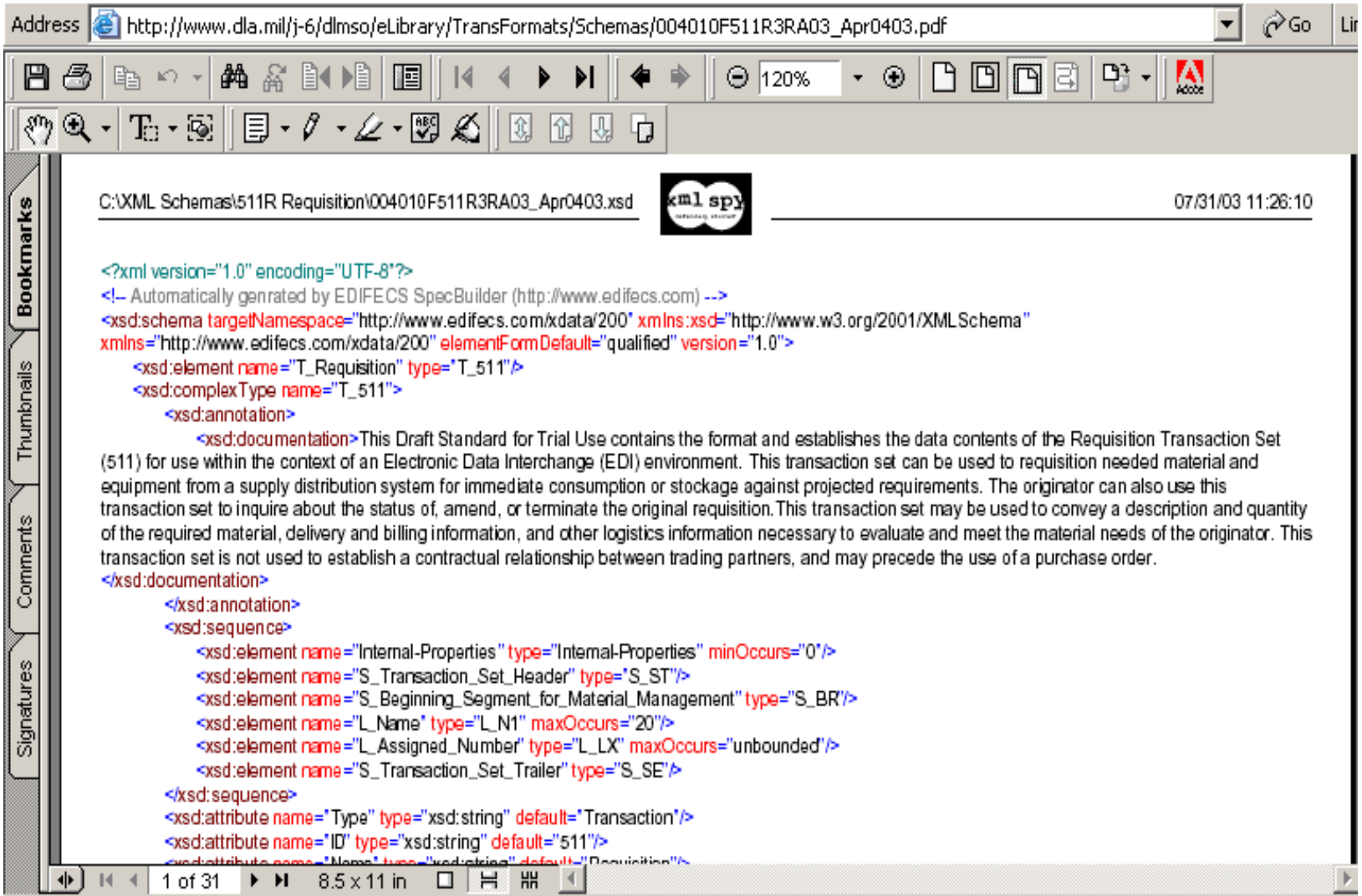




Ensures interoperability among trading partners for interagency transactional exchanges

Business Rules and

XML Schema



Business Rules and

Where We Are

Current status:

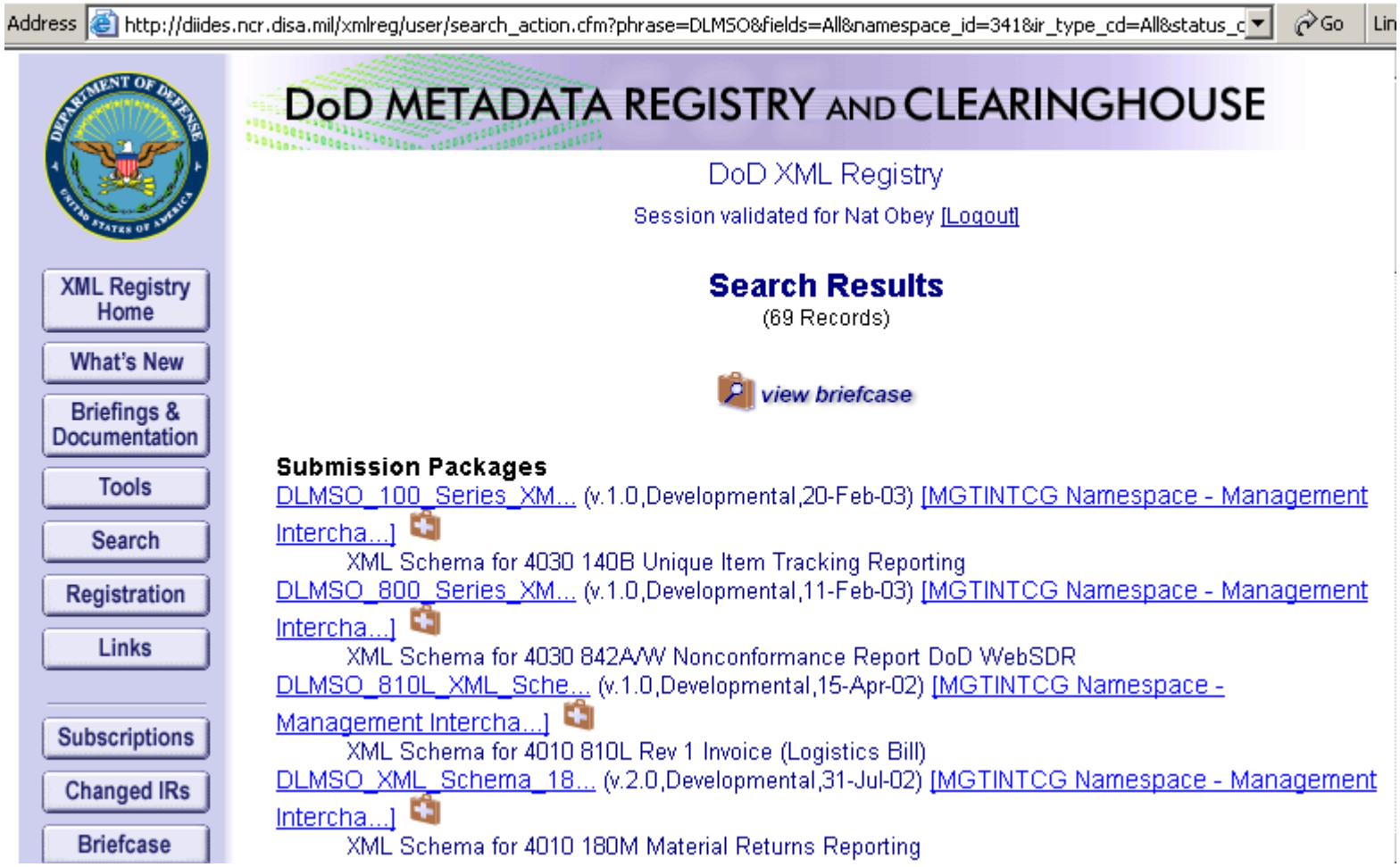
- DLMSO has acquired COTS tools: EDIFECS & X
- Schema generation (version 2) is complete
- DAASC has acquired Mercator v6.5 Schema In
- DLIS & DISA repositories in place
- Schemas posted to DLMSO's XML web page

Next steps:

- DLMSO continue to post schemas to DISA/DLI
- Continue to monitor progress of ANSI's Conte
  Component Architecture (CICA) for XML – tar
- DAASC develop maps
- DLMSO/DAASC/DLIS develop operational syst
- DLMSO prepare and have OSD issue policy m

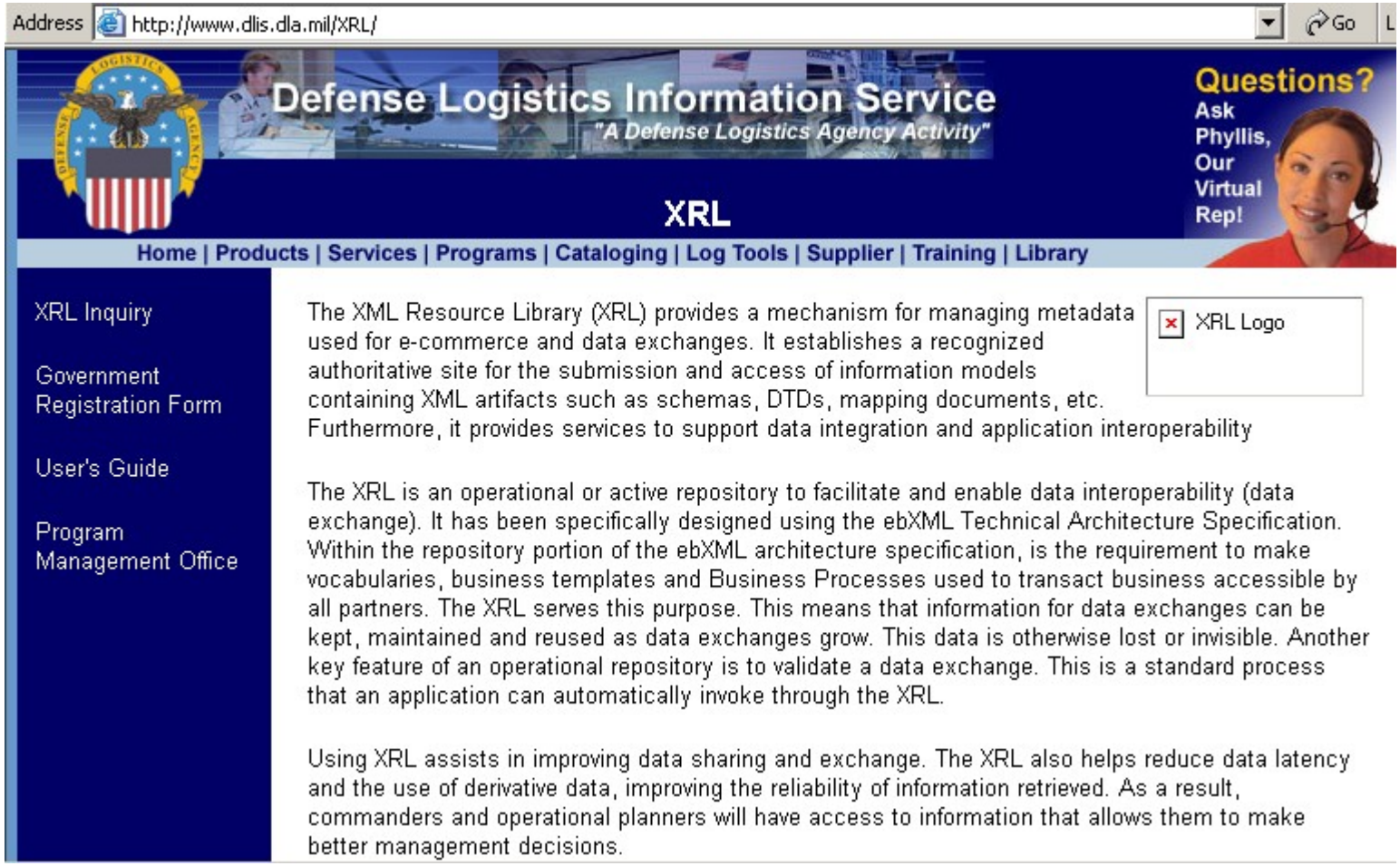
Business Rules and

DISA Repository http://diides.ncr.disa.mil/xmlreg/user/index.cfm



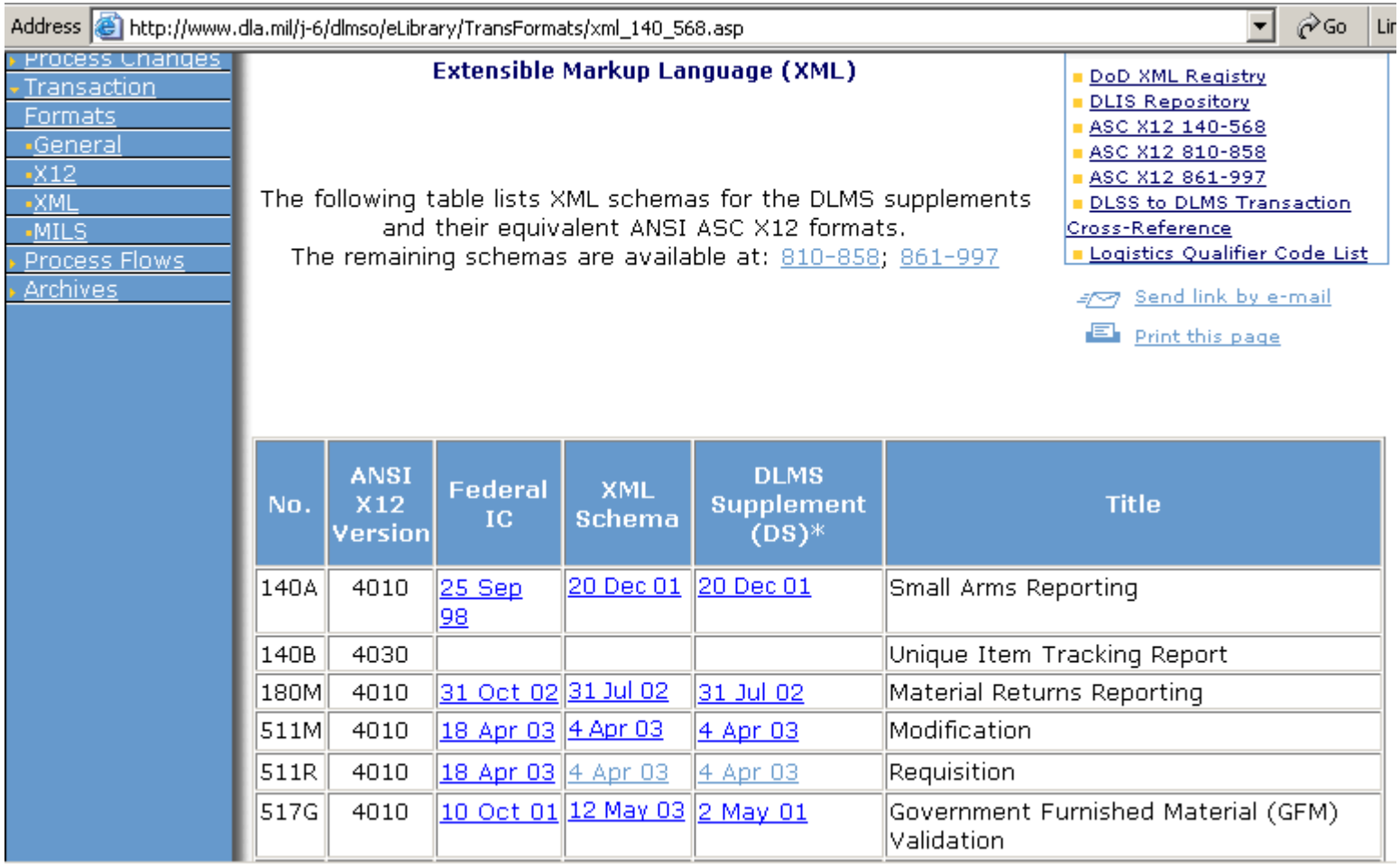
Business Rules and

DLIS Repository http://www.dlis.dla.mil/XRL



Business Rules and

DLMSO XML Web Page http://www.dla.mil/j-6/dlmso/eLibrary/Trans

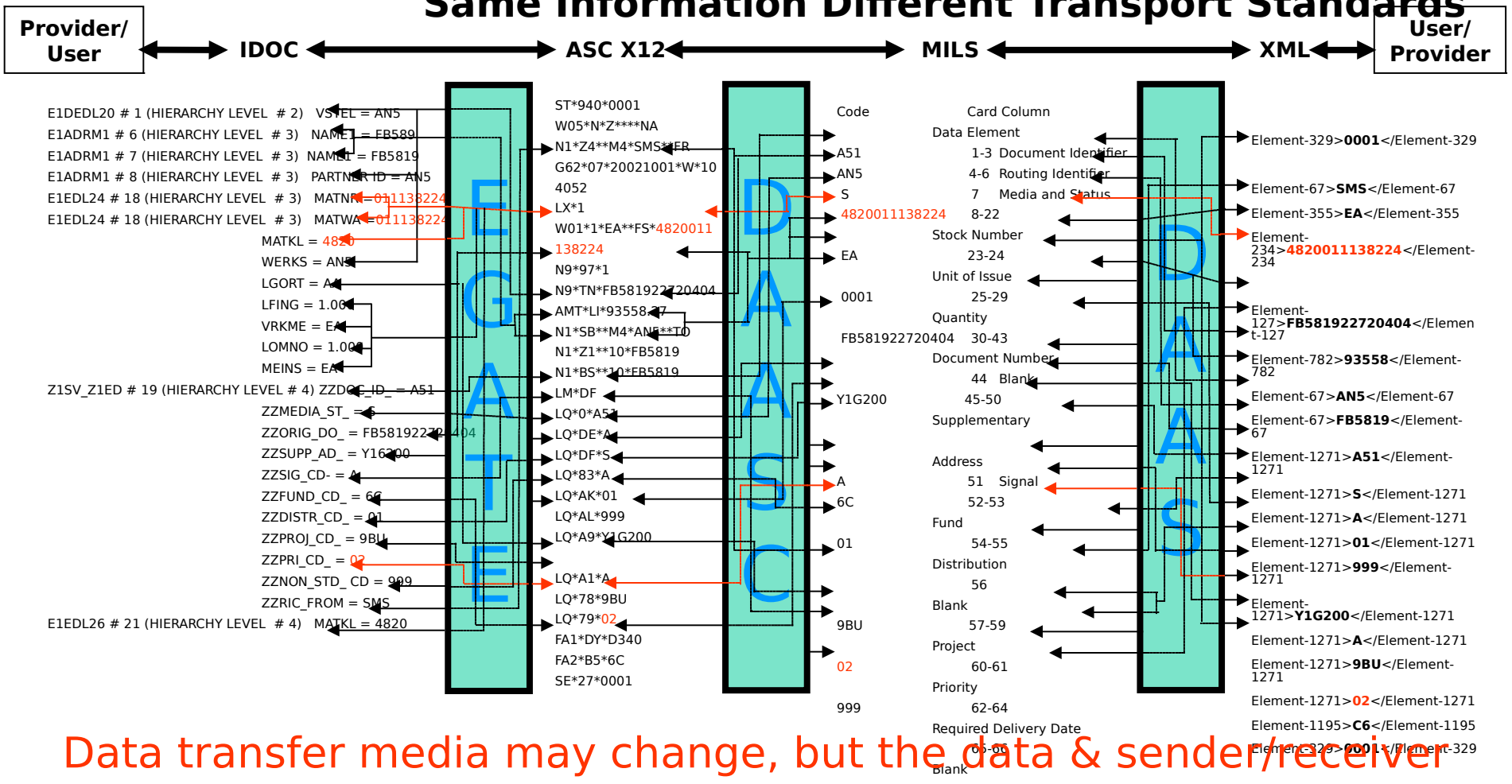


No.	ANSI X12 Version	Federal IC	XML Schema	DLMS Supplement (DS)*	Title
140A	4010	25 Sep 98	20 Dec 01	20 Dec 01	Small Arms Reporting
140B	4030				Unique Item Tracking Report
180M	4010	31 Oct 02	31 Jul 02	31 Jul 02	Material Returns Reporting
511M	4010	18 Apr 03	4 Apr 03	4 Apr 03	Modification
511R	4010	18 Apr 03	4 Apr 03	4 Apr 03	Requisition
517G	4010	10 Oct 01	12 May 03	2 May 01	Government Furnished Material (GFM) Validation

Business Rules and

Supply Chain Transaction Flow

Same Information Different Transport Standards



Data transfer media may change, but the data & sender/receiver rules do not.

Business Rules and Stan

Summary:

- **We are expanding our overarching logistics role to meet today's enterprise integration challenge and support the future logistics enterprise by:**
  - **Migrating DoD away from proprietary EDI standards**
  - **Actively supporting Component modernization**
  - **Exploring & implementing new technology solutions**
- **End-state:**
  - **Support the adoption of the best business practices**
  - **Ensure that business transactions are successfully exchanged among DoD AISs, regardless of the data transmission media (standards) used by the AISs involved.**
- **The DLMS are now XML capable and ready for your use**

http://www.dla.mil/j-6/dlmso/

MODELS
1984
FIPS 161.2
1996
XXXX
XXXX
DoDD
8190.1
2000
XML
2002
MILS
1960'S